MINUTES OF THE 2012
ANNUAL BASIN-WIDE MEETING
FOR JOINT INTEGRATED WATER RESOURCES MANAGEMENT
OF OVERAPPROPRIATED PORTIONS OF THE PLATTE RIVER BASIN
June 21, 2012
North Platte Natural Resources District office, Scottsbluff, Nebraska

Attendance

Ron Bishop	CPNRD	John Thorburn	TBNRD
Jesse Mintro	CPNRD	Kent Miller	TPNRD
Ron Cacek	NPNRD	Thad Kuntz	Adaptive Resources, Inc.
Tina Kurtz	NPNRD	Don Kraus	CNPPID
Greg Jackson	NPNRD	Brian Barels	NPPD
David Wolf	NPNRD	Bruce Rolls	North Platte
Jeffrey Sprock	NPNRD	Dennis Strauch	Pathfinder Irrigation
Rod Horn	SPNRD	Pat Goltl	DNR
Ryan Reisdorff	SPNRD	Jennifer Schellpeper	DNR
Bill Halligan	SPNRD		
Travis Glanz	SPNRD		

1. Introductions

Ron Cacek, Manager of the North Platte Natural Resources District (NPNRD), began the meeting with introductions throughout the room.

2. Review Agenda

Cacek asked if there were any additions to the agenda and none were suggested.

3. Discuss Procedures for the Basin-Wide Plan Annual Meeting

Ms. Schellpeper stated DNR would be giving their report of activities from the past year along with the five NRDs. There would be opportunities for the public to comment or raise issues on the Platte River Basin-Wide Plan.

4. Monitoring & Management Actions

A. DNR Report

Ms. Schellpeper stated a copy of the DNR report was on the back table along with an accompanying CD. The report was based on the activities for the calendar year of January 1 through December 31 of 2011. There were 20 new surface water permits issued, one dam safety permit, and two ground water permits. 19 of the new surface water permits were involved in the Recharge Project from 2010 using excess flows that weren't committed to existing uses or existing water rights. The dam safety permit involved was for livestock and the groundwater permits were transfers across state lines and for industrial uses. In additions to those permits, seven surface water permits were cancelled as per the table found in the report. Additionally, table 5 was a table of depletions for newer expanded permitted activity and existing mitigations. One temporary permit dealing with depletions with the net effect was included on table 5. Table 6 in the report talked about estimates of accretions from the spring and the fall groundwater recharge project stating these various projects the Department has been participating in provide a net effect to the stream accretions greater than any of the depletive affections from the permits issued. These reports have been on the Department's websites for the past two weeks; the Department welcomes any questions. No questions were asked.

B. NRD Reports

i. CPNRD

In 2011, the Central Platte NRD had 136 transfers/transactions including 1,200 new irrigated acres in which 850 acres were provided as offsets as retired acres, 332 surface water acres retired, 395 groundwater acres retired which equaled 2,801 affected acres, and a total of 1,016,660 acres certified. Central Platte issued 155 well permits. Further details can be found in the report regarding the types of permits issued.

ii. NPNRD

Cacek said the NRD did not have any new certifications but three transfers of certified irrigated acres and the point of withdrawal were approved. One transfer did not occur as the applicant decided not to implement it; so, in effect, North Platte had two transfers. Those two transfers resulted in 141.1 acres being transferred with 139.7 acres able to be irrigated at the new locations. One variance from North Platte's rules and regulations was granted because the point of withdrawal changed from the overappropriated area to the fully appropriated area with the depletion percentage for the wells being used going from 78% to 0%. North Platte issued eight well construction permits for replacement wells. One permit was issued for a new well that was part of a transfer permit approved in 2010. One permit application was denied because it was to replace a well that was not certified. The preliminary water year 2011 groundwater use information in the overappropriated area, including Pumpkin Creek Basin, was 109,677 acre-feet on 161,094 certified acres with an average of 8.2 acre-inches per acre. North Platte stated that the use information was preliminary due to situations such as failed flow meters where the use is still being determined. With regard to the retirement of certified irrigated acres, 744.57 acres were contracted for temporary retirement under the USDA's AWEP (Agricultural Water Enhancement Program) and 167.5 acres were contracted for permanent retirement under the AWEP program and the Platte Basin Habitat Enhancement Project (PBHEP). During the spring of 2011, 10 irrigation districts and canal companies participated in the canal recharge flood mitigation project. During this project, 44,470 acre-feet was diverted from the North Platte River with an estimated recharge of 20,490 acre-feet. In the fall of 2011, North Platte participated with irrigation districts and canal companies on recharge projects with a total of 33,308 acre-feet diverted from the river, with an estimated recharge of 11,454 acre-feet. Data was collected from all 12 municipalities with public water supply systems with per capita use ranging from with slightly over 75 gallons per day up to 426 gallons per day. Acreage data was gathered from seven golf courses within the district that have wells. There were no increases in the size of these golf courses and North Platte was working with industrial users to establish baseline annual uses.

iii. SPNRD

Reisdorff reported the information found in the South Platte NRD report was based upon the 2011 irrigation season and for the industrial/municipal side, August 1, 2010 through July 31, 2011 season. Over that time frame, South Platte had a total of eight transfers; five of these were basically pivot conversions. On all of these, there were no changes in consumptive use and no acres were expanded. South Platte had two industrial transfer permits and they went along with the state transfer permits. There was no new consumptive use for one as all offsets were coming from the irrigated acres and the other one was governed by the § 46-740 N.R.R.S. accounting baseline system. The final transfer moved gravity irrigation from three separate irrigated tracts to a new location, acre to acre transfer with no new consumptive use. For well construction permits, South Platte NRD had no new wells and one replacement well issue. However, the replacement well did not get drilled and the permit expired. There were two variances. The first one was to add 5.6 certified acres to an existing irrigated tract which wasn't accounted for the first time. The second variance was a modified variance from our last year's report that occurred on an industrial well which didn't have any information to establish a baseline until a flow meter was added. For industrial accounting,

South Platte has three possible categories of industrial well baseline development. The first category is the non-baseline certification, of which there are 21 certifications. In this category there was no documented well use of the existing industrial wells available during the baseline period. If a well isis used in the future, it would have to be offset by the owner. Four of these wells are now being used and all offsets were coming from existing certified acres resulting in no new consumptive use. The second category of industrial baselines is variances to the baseline period. South Platte has seven known industries active during the baseline period but had no way of documenting the water use. South Platte has seven industries in their district with active baselines for the total amount for these industries being 332 million gallons. Last year's industrial usage was 156 million gallons. For municipal accounting, South Platte had 10 municipal baselines equaling 1.5 billion gallons. Last year, according to meter data, they pumped approximately 1 billion gallons. For irrigation water use, the total certified irrigated acres were 132,869869 acres. According to flow meter data last year, 97,000 acre-feet of water were pumped equaling nine inches per acre. In the South Platte District, corn equaled 51% of all irrigated crops with small grains equaling about 20% of the irrigated acres. The year 2011 was the fifth year of allocations in the Lodgepole Creek subarea. For retired acres and stream flow accretions, the total retired/decertified acres in the South Platte District were 1,377 acres of which 158.6 acres were retired in 2011. The grand total was 548 acre-feet to benefit for the over-appropriated area. Other activities include the Lodgepole Creek Flow Evaluation Study –Western Water Use Model, historical acre data sets for the whole NRD, and the Western Canal Recharge Project.

iv. TBNRD

Thorburn explained there are a total of 298,433 certified acres in the Platte Basin portion of Tri-Basin NRD. Tri-Basin allowed transfers of certified irrigated acres only in cases where there would be no net increase in consumption. There were three transfers in the Platte River Basin last year totaling 158 acres. The District allowed four groundwater transfers. Tri-Basin issued 38 well permits in which 34 were true replacement permits and two were conditional replacements where an additional well was drilled on existing surface water irrigated acres with no new consumption. They did allow one new irrigation well permit for perceived transfer acres but had no history prior and one dewatering well. Tri-Basin NRD's stream augmentation flow well is online and their first operational test has been completed by running continuously for two weeks. The primary benefit anticipated from this well would be for the fisheries as it flows into the tributary of the Platte River upstream in Kearney. Tri-Basin ran a two week continuous test of the well and gathered data on stream flow temperature and fish levels which will give an indication of the usefulness of the project. The NRD did make some corrections to their certified acres database which in table six of their report. It was reported as expanded irrigated acres, but these were two center pivots that had been enrolled in the CREP program and came back into use. The board allowed those acres to be certified on the condition the landowner agreed to offset the depletions resulting from that new use. Thorburn touched on the NRD's augmentation wells and other activities in terms of offsetting depletions in stream flow. In 2008 and 2009, the NRD worked with CNPPID to divert high flows from the Platte River into the Elwood Reservoir. The recharge benefits for stream flow accretions are 484 acre-feet in the past year. The NRD also worked with CNPPID and compensated them for diverting 5,550acre-feet into the Phelps County Canal last fall. The NRD has a contract with CNPPID to convert 1,633 acre-feet of irrigation water rights to in-streams uses. The change in water rights were still the process of getting approval from DNR and have not gone into operation as of yet. The board has been trying to inventory cropland acres that have a no-till or conservation system. Through the groundwater inventory, the NRD knows that 57,550 acres were reporting use of conservation tilling and they estimate 120,000 of the 298,000 irrigated acres are under some kind of no till or conservation system.

v. TPNRD

Miller reported Twin Platte NRD had 317,974 total certified irrigated acres with a decrease in Keith County and an increase in Lincoln County because those acres were moved downstream. The increase in irrigated acres was 491.25 which came partly from acres in the Conservation Reserve Program and corrections from the original certifications that were made. The board has allowed corrections in certified irrigated acres, but once the Board passes revisions of their rules and regulation in the near future that likely will not be allowed.. There were 35 transfers allowed during the year and no changes in acres as a result of those transfers. There were 17 replacement wells and eight new wells with no new consumptive use. Wells were allowed only on existing certified acres. In the municipal account, there were seven golf courses in the district with an established baseline in irrigated acres. The baseline is still being developed for the industrial wells. Thorburn asked if the board considered how to address the facts implication when doing a correction for certified acres. The Twin Platte NRD Board requires anybody requesting a correction of certifiedacres to provide proof. Miller responded the board determined what proof was considered in the rules and regulations.

C. New Data and Information/Studies

Ms. Schellpeper stated this report included all of the integrated water management plans. A table of accretions and depletions was developed based upon all of the data information from the permit reports from the NRDs. Basically, table one shows the depletions and the mitigations for each of the NRDs including the number of permits used in this analysis and the total net effect due to the permitted activities throughout the whole NRD area. The table shows net effects to the river flows being positive.

i. Presentation on Basin Projects

Ms. Schellpeper gave a presentation on the water projects being implemented by the NRDs and the Department and the new data, studies, and information being generated by the projects. A copy of the presentation can be found on the Department website at this location:
http://dnr.ne.gov/IWM/Presentations/PresentationforPlatteBasin-wide6212012.pdf
First, Ms. Schellpeper reviewed the goals and objectives in the Basin Wide Plans and the Integrated Management Plans. She reviewed maps of the areas of fully and overappropriated surface water and the hydrologically connected groundwater in the Upper Platte River Basin. In the Basin-Wide Plan, there are four goals: 1) keeping the plan current, 2) working cooperatively and identifying/investigating disputes, including having an adaptive process, receiving feedback from stakeholders, and having the public involved, 3) achieving and sustaining a fully appropriated condition with specific objectives to offsetting streamflow depletions from existing users post-July 1, 1997, and 4) preventing reductions to streamflow that would cause non-compliance with an interstate compact or decree., This annual public meeting is an integral part of achieving goals 1 and 2. For items 3 and 4, the annual reports given by the NRDs and the Department are a vital component and more specifically the water projects being developed are key to meeting the goal of achieving a fully appropriated condition. There are 4 categories of water enhancement projects being implemented at this time: conjunctive management, groundwater retiming, regulatory actions, and irrigation retirements

Projects in the conjunctive management category include Cozad Canal and Thirty-Mile Canal, both initiated by the Central Platte Natural Resources District. Also included are the numerous canal seepage projects from the 2011 Demonstration Project initiated by the Department in cooperation with a number of irrigation districts, Elwood Reservoir, and J-2 Reservoir. For Cozad Canal and Thirty-Mile Canal, preliminary estimates were developed by the NRD of 8,000 acre-feet per year of recognized benefit or accretions to the stream. The project uses PBHEP funding.

As part of the canal demonstration project, 23 different canals worked with the Department and NRDs diverting over 200,000 acre-feet and seeping around 90,000 acre-feet. The annual benefit to the river in the next 10 year period is estimated at 21,000 acre-feet or an average annual value of 2,300 acre-feet. In Elwood Reservoir, the partners CNPPID and Tri-Basin NRD stated the water was diverted in 2008 and 2009. The estimated average annual accretion from the Elwood Reservoir project for the next 10 year period is 180 acre-feet with a range from 300 to 900 acre-feet annually. The J-2 Re-regulating Reservoir project includes partners PRRIP, CNPPID, the Department, and the NRDs. Current studies show accretions of 10,200 acre-feet benefiting both the state and the NRDs.

During his presentation on the NRD's report, John Thorburn of the TBNRD discussed two groundwater retiming projects: the Kappa pipeline and North Dry Creek augmentation wells. These projects are estimated to supply an annual accretion of 1,100 acre-feet. The groundwater retiming projects differ from the groundwater recharge projects because they are an on-demand system; the well can be pumped and the water goes immediately into the stream and is available to meet the needs in the river. Conversely, groundwater recharge projects supply accretions to the river steadily through time based upon the hydrogeologic properties of the aquifer into which the water was recharged.

As a regulatory action, the North Platte NRD put allocations in place. The preliminary estimate of the impact from the allocations is an average annual accretion to the river of 4,000 acre-feet with a range from 3,000 to 4,700.

<u>The retirement of irrigated land has occurred across the upper Platte Basin</u>

Many Federal projects such as AWEP, EQIP, and CREP are being used to leverage as many federal dollars as possible for these projects. The result is approximately 5,000 acres of permanent retirements and over 16,000 acres of temporary retirements, with the term of the temporary retirements ranging anywhere from 3 years to 15 years on average with an estimated 6,000 acre-feet per year benefit. The total benefit from all of these projects is estimated at 40,000 acre-feet per year.

In terms of the Basin Wide Plan, the Integrated Management Plans, and the objectives of the Plans, the water enhancement projects are to be evaluated to understand how the goals of the Plan are being met. In the Integrated Management Plans, there is an entire chapter regarding monitoring. The monitoring chapter contains three distinct parts: 1) the tracking and reporting of water use activities, 2) measuring the success of meeting the goals and objectives of the IMPs and 3) evaluating the need for a subsequent increment. Part two has two subparts, the annual review and the five-year robust review. The annual analysis of depletions and accretions presented today in DNR's report and the combined NRD report summarizes the progress in meeting the annual review component of the Plans. An important component of understanding the progress toward the goals is to first understand the goal. In statute as well as the Plans, existing users are to be protected and a fully appropriated condition is to be achieved and sustained. The purpose of the five-year robust review is to evaluate the sufficiency of the NRD and State measures to offset the new and expanded uses post-July 1, 1997. To do this, basin water budget needs to be modeled. Schellpeper showed a diagram of the water balance budget with the various components being considered in the models. There are three interfaced models: a watershed model, a surface water model, and a groundwater. No model in this system stands alone. She showed the interaction between the watershed model and the groundwater model with the recharge component moving into the surface water model and the baseflow component coming out. The two modeling projects in the Upper Platte Basin are COHYST 2010 and the Western Water Use Model (WWUM). Data set development includes irrigated acres, municipal/industrial/rural consumptive use, livestock consumptive use, and small reservoirs and sandpits. Both COHYST 2010 and the WWUM are in various stages of calibration at this time. In conclusion, the intent of the modeling projects are to complete the robust analysis to give a measure of how the NRDs and Department are meeting the goals and objectives of the IMPs, including how the measures are affecting existing uses in time and location.

Presentation on 2011 Groundwater Demonstration Project
A copy of the presentation can be found on the Department's website here:

http://dnr.ne.gov/IWM/Presentations/CanalSeepageProjects6212012.pdf

Goltl stated in 2011, the Department staged the groundwater recharge demonstration project in the spring and fall. The purpose of the project was to divert streamflows in excess of program target flows of the Platte, North Platte, and South Platte Rivers to the existing infrastructure of the canal systems and, under the Western Irrigation District canal, into ponds. Water was diverted before and after the normal irrigation season so it was an added benefit to the system and not just historic flows that normally occur. Excess flows can frequently occur based on available flow records shown in the presentation. Numerous partners were involved in the recharge project: 23 different canals; one pond system underneath the Western Canal; five NRDs (Central Platte, North Platte, South Platte, Tri-Basin, and Twin Platte); DNR; and PBHEP. During the spring, many of the major canals from the state line down through the central Platte participated.

Some canals started diverting on April 1st while others started around April 15th. The canals ran for 30 days in the spring. In the fall, diversions started once irrigation season was over and those canals diverted for more than 30 days up to100 days, averaging 40 to 50 days.

To estimate the canal seepage amount and the water recharge, a simple water balance method was used taking average daily canal diversions minus the amount measured in the spills. The spills do not have measuring devices so discharge measurements from Bridgeport field office staff was used to determine average loss from the total diversion. Since there were not many people to conduct the discharge measurements on some of the estimates, the STELLA model was used which showed a standard 32% loss. The canal seepage estimates were compared to historical seepage run measurements or known operational efficiencies for different canals that were available. Goltl showed a breakdown of the methods used for each canal. Some of the canals have historical seepage runs for loss percentage; others were calculated through discharge measurement spills and other data were estimates from the STELLA model.

To determine the response and the accretions to the system, the loss percentages were combined with depletion functions for the PBHEP depletion zones to create accretion functions to represent recharge in a single year. The accretion functions were then used to estimate the accretions to the river for the next 50 years. In general, the response showed a steep rise in the amount of the water breaching the system initially leveling off over time. Goltl showed the accretion data from various canals. In Pathfinder Irrigation District, there was a gradual increase then decrease which tapers off a little more slowly for about 15 years out so when accretions occur while others have a much shorter time frame.

The amounts of accretions determined from using the zones and response functions for each year showed roughly 1,500 acre-feet in 2011 which will increase up to 2,300 acre-feet per year on average for the 2011-2019 time periods. Overall from the spring and fall diversions, 200,000 acre-feet would be diverted and 90,000 acre-feet would seep into the ground based on the estimates which resulted in the accretions for 2011 through 2019 of 21,000 acre-feet and an average of about 2,300 acre-feet which brings the total accretions to 50,000 acre–feet through 2060. The data was based on a draft report sent out by Doug Hallum. A question was posed: for the 2,300 acre-feet accretion was the information from STELLA or a groundwater or from both? Goltl answered that the information was provided by the groundwater model through the six PBHEP zones.

D. Guidance Document Development for Annual and Robust Analyses

DNR

Goltl announced a technical team from the Department and individual members from the NRDs worked on developing a guidance document particularly used to process the annual reports. The document would be used in conjunction with the less frequently collected information outlined in the Basin-Wide Plan and will also help generate the Robust Review. The Department is planning to get the document approved this July.

5. Proposed Revisions to the Basin-Wide Plan or to Individual IMPs & Disputes

A. DNR or NRD Requests

Cacek stated he was not aware of any proposed revisions to the Basin-Wide Plan.

i. Revisions to the CPNRD IMP

Bishop explained CPNRD revised their IMP because it impacted the eastern part of the NRD primarily below Chapman, NE. He showed a map of the location of the NRD, showing the area on the left as the overappropriated area, Dawson County and the pieces of the adjoining counties above Elm Creek. The area was originally designated as fully appropriated by the Department when LB962 passed but was never fully appropriated according to CPNRD because of the demand for water there: the demands for the instream flow and the demands for the one irrigation right. When the two are combined, the water demand is only 70% of the annual flow at Duncan located at the bottom end. There was never any study done below Elm Creek. The Director of the Department at that time however designated the area as fully appropriated not because it was steady but because of some actions that had been taken in measuring groundwater. CPNRD did some revisions and improvements in the evaluation of what was fully appropriated. Once that is completed, they are asking for a formal evaluation by the Department and they are confident that the area won't be fully appropriated. Elm Creek, as far as demands of water rights, wouldn't be fully appropriated either. However, because Nebraska signed on to the Platte River Recovery Implementation Program and that Program calls for protecting flows down to Chapman, there can be no new uses in the area. . So CPRND left that area as fully appropriated. The area below has been opened up to very limited amount of new development at 2,500 acres per year and not to exceed a graft on the river of 500 cfs on an annual basis. This has been in effect for one year and some new development has taken place with the amount of acres being close to the limit and the graft on the river being about 1/3 of the maximum allowed. CPNRD monitors the impact every year. Basically, the modification opened up the area below Chapman, below the PRRIP's endangered species area. The only flow demands in that area are the instream flow requirements and one water right for irrigation. Even though the instream flows increase below Columbus, that area was not fully appropriated. This strengthens the NRD's belief that the green area on their map was not fully appropriated. It isn't being driven by water demands in and below the area. Central Platte NRD proposed the Department change and modifies the IMP to allow limited development of less than one cfs per day impact on average to the Platte River. The NRD would be operating until such time the Department reevaluates the fully appropriated status. This idea was similar to the limited development programs in those areas downstream on the Platte where they first declared fully appropriated until the declaration was lifted. There was legislation passed limiting how much and how fast development could occur for the first four years. Those same principles are being applied to the area below Chapman.

A comment was presented, "I don't remember PRRIP where there were no new depletions above Chapman and below Columbus." Schellpeper explained, for groundwater, it's above Chapman. For surface water, it's the confluence of the Loup. It's affected by anything that's above Chapman in the hydrologically connected areas.

Bishop reiterated that it's anything that impacts the Platte River above Chapman, any groundwater activities. Through the model, those areas that clearly impact the River at Chapman or above have been identified and the area that doesn't impact the River is in the blue/green area. Another question was posed: how do you select which farmers get acres and did you base that solely on depletions or other considerations? Bishop answered: It was a combination of things to be considered. One operator, one development per year **(could not hear due to background noise).** The smaller the acres, the better-they got a high priority. We were able to approve 6 developments and 10 were turned down because they reached the limitations with the impact on acres.

B. Stakeholder/Public Requests:

A letter addressed to Ron Bishop regarded depletions to Lake McConaughy from the 2010/2011 water year. In 2011/2012, the lake dropped below 50% of the median with a concern about dryness in the area. A graph handed out at the meeting showed a general decline of water through the storage and irrigation seasons, bringing more concern. The letter included an attached copy of the Lytle Water Solutions model results indicating depletions exceeding 100,000 acre-feet per year.

Bishop asked Kraus about specifics. Don Kraus asked for reduced allocations in the North Platte NRD to address conflicts and restore baseflows in the North Platte River. Cacek concluded the letter would be considered and someone would get back to them in regards to the issue.

6. Public Comment Period

Miller shared public comments from Roric Paulman. Paulman called him shortly before the meeting and found out that afternoon the meeting was being held. He wishes the meeting notice was more visible. The meeting date was set a year ago but the group could post the meeting on their websites to have it available for public. The other comment he had was to respond to any correspondence within 60-90 days. Miller concluded he would respond to Paulman's inquiries.

7. Meeting Summary

A. Action Items:

Miller suggested the basin respond to comments within 90 days. He assumed responsibility for answering any correspondence would be the chair for that year. A procedure was suggested to answer any correspondence within 60 to 90 days.

B. Schedule Next Annual Meeting:

The next meeting for the Basin-Wide Annual Meeting will be held on Thursday, June 20, 2013, at 1:00 pm in Sidney, Nebraska. Rod Horn from South Platte NRD will be chair.